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U.S. DISTRICT COURT - N.D. OF N.Y.
FILED
AUG 10 2001
AT _____ O'CLOCK
Lawrence K. Baerman, Clerk - Binghamton

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA,

Plaintiff,

-against-

97-CV-0436

ALLIEDSIGNAL, INC. and AMPHENOL CORP.,

Defendants.

ALLIEDSIGNAL, INC. and AMPHENOL CORP.,

Third-Party Plaintiffs,

-against-

TOWN OF SIDNEY, NEW YORK, VILLAGE OF
SIDNEY, NEW YORK, TOWN OF MASONVILLE,
NEW YORK, and TOWN OF TOMPKINS,
NEW YORK,

Third-Party Defendants.

McAvoy, D.J.:

DECISION & ORDER

I. Procedural Background

The United States of America commenced the instant litigation against defendants Alliedsignal, Inc. and Amphenol, Corp., as successors in interest of the Bendix Corp. (collectively "Alliedsignal" or "Defendants"),¹ pursuant to section 107(a) of the Comprehensive Environmental Response,

¹Defendant Alliedsignal, Inc. is now Honeywell International, Inc. Throughout this Memorandum - Decision & Order, the Court will use Bendix and Alliedsignal interchangeably.

92-11-2-11280
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Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9607 ("CERCLA"), seeking recovery of costs incurred by the United States with respect to the release or threatened release of hazardous substances at or from the Sidney Landfill Superfund Site (the "SLF" or the "Site") located in the Towns of Masonville and Sidney, New York. Defendants, in turn, commenced a third-party action against the Town of Sidney, the Village of Sidney, the Town of Masonville, and the Town of Tompkins (collectively the "Municipal Defendants") seeking: (1) recovery for past and future response costs at the Site pursuant to 42 U.S.C. § 9607; (2) contribution for all past and future response costs pursuant to 42 U.S.C. § 9613, N.Y.C.P.L.R. § 1401, and common law; (3) indemnification; and (4) a declaratory judgment defining the future obligations of the parties.

By Memorandum - Decision & Order dated August 18, 1999, United States v. Alliedsignal, Inc., 62 F. Supp.2d 713 (N.D.N.Y. 1999), recon. denied, 72 F. Supp.2d 29 (N.D.N.Y. 1999), familiarity with which is assumed, the Court denied the United States' motion for approval of a consent decree with the Municipal Defendants. In that decision, the Court also dismissed Alliedsignal's cause of action pursuant to 42 U.S.C. § 9607 against the Municipal Defendants and otherwise denied the Municipal Defendants' motion for summary judgment.

By Memorandum - Decision & Order dated March 30, 2001

United States v. Alliedsignal, Inc., 97-CV-436, Dkt. No. 143,² familiarity with which is assumed, the Court found Alliedsignal liable for response costs at the SLF.³ The Court further found that, during the relevant time period, Bendix disposed of waste oil at the SLF, however, the Court found that a triable issue of fact existed regarding the quantity of waste oil Bendix disposed of. Notwithstanding the finding that Bendix disposed of waste oil at the SLF, the Court found that there was a triable issue of fact regarding whether Alliedsignal was jointly and severally liable for the harm at SLF and, if not, whether it had proven a reasonable basis for apportionment of the harm. In this regard, the Court noted that the mere fact Bendix waste oil has been deposited at the SLF does not mean that the harm is indivisible. United States v. Alcan Aluminum Corp., 990 F.2d 711, 722 (2d Cir. 1993). Instead, the Court found that the focus must be on whether Alliedsignal has demonstrated a reasonable basis for dividing up the harm and whether Alliedsignal's contributions to the site over and above their solid waste (i.e., the waste oils), either individually or when mixed with the other substances at the site, affected the response costs. United States v. Monsanto, Co., 858 F.2d .

² On March 9, 2001, the Court heard oral argument on this motion.

³ Alliedsignal conceded liability.

160, 172 (4th Cir. 1988). The Court found that Alliedsignal had submitted evidence suggesting that the amounts of oil it may have deposited at the SLF did not increase the toxicity, migratory potential, degree of migration, or synergistic capacities of the hazardous substances at the site by way of its expert testimony that the conditions at the site are consistent with what is found at a typical municipal solid waste ("MSW") landfill. The Court concluded that summary judgment was not appropriate because, if, at trial, Alliedsignal upheld its substantial burden and proved by a preponderance of the evidence that the environmental harms at the SLF were consistent with those found at a MSW only landfill and were not increased by Bendix's waste oil and, thus, that apportioning liability based upon the potentially responsible parties' (the "PRPs") relative volumetric contributions would be reasonable, then it would establish divisibility.

In the March 20, 2001 Memorandum-Decision and Order, the Court granted the Third Party Defendants' motion for summary judgment in part and dismissed Alliedsignal's state-law based contribution and indemnity claims.⁴ The Court denied the Third Party Defendants' summary judgment motion in all other respects. Prior to trial, the third party suit settled.

The bench trial in this action commenced on June 18, 2001

⁴ Alliedsignal conceded that dismissal of these claims was appropriate.

in Watertown, New York and concluded on June 25, 2001. At the close of Defendants' proof,⁵ the Government moved for a judgment as a matter of law pursuant to FED. R. CIV. P. 52. The Court reserved decision on that motion.

II. Evidentiary and Jurisdictional Issues

A. CERCLA § 106 (B) (2)

At the commencement of trial, the Government argued, for the first time, that CERCLA § 106(B)(2) ("Section 106(B)(2)") deprived this Court of jurisdiction to determine whether Defendants have already incurred more than their proportionate share of response costs.⁶

⁵ Because Defendants had the burden of proof with respect to the issues at trial -- divisibility and apportionment of harm -- Defendants presented their proof first.

⁶ Section 106(B)(2) reads, in pertinent part:

(A) Any person who receives and complies with the terms of any order issued under subsection (a) of this section may, within 60 days after completion of the required action, petition the President for reimbursement from the Fund for the reasonable costs of such action, plus interest. Any interest payable under this paragraph shall accrue on the amounts expended from the date of expenditure at the same rate as specified for interest on investments of the Hazardous Substance Superfund established under subchapter A of chapter 98 of Title 26.

(B) If the President refuses to grant all or part of a petition made under this paragraph, the petitioner may within 30 days of receipt of such refusal file an action against the President in the appropriate United States district court seeking reimbursement from the Fund.

(C) Except as provided in subparagraph (D), to obtain reimbursement, the petition shall establish by a preponderance

Essentially, the Government argues that because Defendants claim they have already paid more than their fair share of response costs, this Court cannot determine whether either the harm at SLF is divisible or Defendants proved a reasonable basis for apportionment, but rather, Defendants must utilize Section 106(B)(2) and apply to the Superfund for reimbursement.

The plain terms of Section 106(B)(2) illustrate that it is applicable where a PRP can establish: (1) it is not liable for response costs, or (2) the response action ordered was arbitrary and capricious or otherwise unlawful. In this case, the Court has already determined that Alliedsignal is responsible for response costs pursuant to CERCLA § 9607 and that the Government's response action was not arbitrary and capricious. Accordingly, this case is outside the ambit of Section 106(B)(2).

Section 106(B)(2) is also inapplicable because Defendants

of the evidence that it is not liable for response costs under Section 9607(a) of this title and that costs for which it seeks reimbursement are reasonable in light of the action required by the relevant order.

(D) A petitioner who is liable for response costs under section 9607(a) of this title may also recover its reasonable costs of response to the extent that it can demonstrate, on the administrative record, that the President's decision in selecting the response action ordered was arbitrary and capricious or was otherwise not in accordance with law. Reimbursement awarded under this subparagraph shall include all reasonable response costs incurred by the petitioner pursuant to the portions of the order found to be arbitrary and capricious or otherwise not in accordance with law.

do not seek reimbursement for response costs they have paid, but rather, seek to avoid liability for further response costs based on the well-settled rules of divisibility and apportionment, which would appear to be rendered meaningless in numerous cases should the Court adopt the Government's reading of Section 106(B) (2).

B. Expert Reports

After trial, the parties submitted the exhibits that the Court entered into evidence during the trial. As part of this submission, the Government submitted its expert's report and supplemental report (which the Court did not accept into evidence at trial), along with a letter brief explaining why these exhibits should be entered into evidence. In a letter brief dated July 13, 2001, which the Government responded to in a letter dated July 19, 2001, Defendants objected to admission of these exhibits. The Court will not reopen the record at this juncture to admit these exhibits into evidence. Therefore, the Court did not consider these exhibits in rendering the following decision.

III. Findings of Fact

The SLF is one of two National Priorities List ("NPL") Superfund sites on either side of Richardson Hill Road, near the boundary of the Towns of Sidney and Masonville, New York. The SLF is on the east side of Richardson Hill Road and the

Richardson Hill Road Landfill (the "RHRL") is on the west side of the road.

It is undisputed that Bendix operated an electrical components manufacturing facility in the Village of Sidney during the times relevant to this lawsuit and that this manufacturing facility generated waste oils and solvents. Alliedsignal is the corporate successor to Bendix.

The waste oils and solvents Bendix generated contained, among other things, polychlorinated biphenyls ("PCBs") and volatile organic compounds ("VOCs"). Specific VOCs in the waste include: trichloroethylene ("TCE"), 1,1,1, trichloroethane ("TCA"), perchloroethylene, methylene chloride, methly ethyl ketone, acetone, methanol, tolual, xyloe, and isopropane. Ex. P-5, Morley Test.⁷ Although the waste oil (containing PCBs) and solvents (containing VOCs⁸) had different functions at the facility, the waste oils and solvents were collected and disposed of together. Morley Test.

The parties agree that prior to 1964, Bendix disposed of waste oil and solvents in a pit on its property in the Village

⁷ The Court will site exhibits using the numbers assigned at trial and, where appropriate, page references. Because the final transcript was not yet available at the time of this decision, citations to the record cite only the witness. To the extent the Court notes that a fact is undisputed, that fact has been conceded or taken from the parties' pre-trial stipulations.

⁸ Bendix used TCE as a degreaser. Provenzon Test.

of Sidney (the "Hill Site"). Bendix employees transported waste oil and solvents to the Hill Site in barrels or drums, dumped the contents into the pit, and periodically burned the material. Bendix officially ceased use of the Hill Site in 1964, Ex. P-4, however, a portion of the waste oil generated by Bendix may have been disposed of at the Hill Site until 1966. Provenzon Test.

In 1964, Devere D. Rosa² signed agreements with Bendix and the Town and Village of Sidney to haul their refuse to the RHRL. Ex. D-18, D-19. Bendix's refuse included office trash, which Rosa hauled in a green truck, and waste oils and solvents, which Rosa hauled in a red truck. The office trash included a distinctive circular rubber molding object with a "valve stem" attached. Morley Test.; Bartlett Test.; Rosa Test. Ex. P-20, Figure 4-7. Rosa picked up the Bendix waste oils daily and disposed of them in a pit at the RHRL. Neither Bendix nor Rosa kept track of the amount of refuse or waste oils and solvents Rosa collected from Bendix or other sources. However, the evidence establishes that Bendix generated at least 2500 gallons of waste oil per week. See, e.g., Chang test. (fifty fifty-gallon barrels per week); Morley Test. (eighteen fifty-five gallon barrels per day six days a week); Provenzon Test.

² Devere D. Rosa passed away. The Court heard testimony from his son, Devere A. Rosa, at trial.

It is undisputed that in the spring of 1966, waste oil from the pit at the RHRL overflowed to a nearby marsh area directly across Richardson Hill Road and caught fire. In the aftermath of that spill, the New York State Department of Health ("DOH") ordered Rosa to "cease the collecting and disposal of the spent oil from the [Bendix] plant at your disposal area." Stip. Fact ¶ 17, Ex. D-23. At this time, the City of New York Board of Water Supply, who was responsible for protecting the Cannonsville Reservoir, which is part of the New York City watershed, expressed concern that oil from the RHRL had overflowed into the South Pond (located on the eastern side of Richardson Hill Road directly across from the RHRL and would drain to the South and infiltrate the reservoir system. Ex. D-21; Demick Direct; Morley Direct. As a result of this incident, the DOH ordered Bendix to stop using Rosa to dispose of its waste oils and solvents. D-24.

Despite this DOH directive, and DOH's prior order that Bendix cease and desist burning oil at the Hill Site, Bendix continued to use Rosa to dispose of the majority of its waste oil. Provenzon Test. (testified that Rosa continued to pick up waste oil and solvents until the Prencio incinerator began operating); Morley Test. Bendix also dug a new pit on its property in which it burned some quantity of waste oil. Mirabito Test. (received complaints from residents of the

Village of Sidney as a result of burning), Tiffany Dep. Test. (testified that he witnessed the digging of the pit and dumping of oil into the pit); Ex. D-24. Bendix records suggest that its on-site pit was not intended to be a permanent measure for oil and solvent disposal. D-24 (the DOH "then advised that our method of burning off our oil in this area would run into future troubles"); D-25 ("In addition, we are working with the disposal area operator to relocate the area as soon as possible"). During this time period, Bendix also sold some of its waste oil for use in Asphalt.

In November of 1967, Rosa purchased a plot of land that became the SLF. A DOH case report indicates that dumping began on December 1, 1967. Ex. P-14. The evidence further indicates that Rosa continued to use the RHRL site after he opened the SLF. Inspections of the SLF indicated that Rosa did not use it continuously for refuse disposal in 1968, see, e.g., Exs. D-37; D-41 (2/14/68 inspection report); D-42 (4/11/68 DOH inspection report stating the most recent newspaper found at the site date 1/8/68); D-45; D-50; Demick Test. (he believed Rosa operated the RHRL for part of 1968), and aerial photographs indicate the SLF was not used regularly for waste disposal before April of 1968. Ex. P-1, at 1-2.

On October 31, 1968, Rosa signed a stipulation agreeing to cease and desist use of the RHRL completely within fifteen

days. Ex. D-52. Subsequently, he received a six month extension pending "transfer of operations to a new site," the SLF. Ex. D-60.

As discussed above, Rosa began to use the SLF, at least sporadically, before he closed the RHRL. Direct evidence indicated that Rosa began dumping Bendix waste oils at the SLF as early as the spring of 1968. Ex. D-45 (DOH case report indicating that oil "which had been recently deposited at the new Sidney refuse disposal area site," was found to be entering the headwaters of a feeder stream); Morley Test. (he personally observed disposing of oil in trenches at SLF in the spring of 1968). In 1968 and 1969 (until October) Rosa continued to haul Bendix waste oil and solvents and dispose of them at the SLF. Morley Test.;¹⁰ Bartlett Test. (personally observed Rosa dumping oil into a pit at the SLF).

After considering the record as a whole, the Court finds

¹⁰ Morley, who worked at the Bendix plant and lived next door to the SLF, testified that he personally observed Rosa dumping oil at the SLF on at least 6 occasions. He further testified that on several occasions between 1968 and 1969, he observed Rosa picking up waste oil at the Bendix plant, driving the red truck (which was used for oil disposal) toward the SLF and the RHRL, and dumping oil on the road between the Bendix plant and the SLF to "keep the dust down." Although Morley did not personally observe Rosa dumping oil at the SLF every day, from the totality of the evidence before the Court, the Court can infer that Rosa dumped oil at the SLF on a regular, if not daily, basis. See, e.g., Morley Test.; Bartlett Test.; D-45 (fresh oil at SLF in May of 1968); P-4 (Bendix document stating that Bendix disposed of waste oils and solvents at the RHRL and the SLF between 1964 and 1969).

that Rosa dumped a substantial amount of Bendix waste oils and solvents in the SLF during 1968 and 1969. See, e.g., Morley Test. (including personal observations of dumping and loading of eighteen fifty-five-gallon barrels on Rosa's red truck on a daily basis between 1965 and 1969); Bartlett Test. (including personal observations of dumping and observation of fifty-five-gallon barrels on red truck); Provenzon Test. (Rosa continued to pick up waste oil and solvents in 1968 and 1969); P-6 (Rosa's February 22, 1969 request to burn approximately 50 barrels per week of Bendix waste oil and solvents); Demick Test. (from his observation believes that Rosa stopped using the oil pit at the RHRL in September of 1967); see also Exs. P-10 (DEC Phase II report finding VOC and PCB contamination directly attributable to the SLF); P-1 (investigative report indicating PCB and VOC contamination).¹¹ As will be discussed in more detail below, Bendix's waste oil and solvents caused environmental harm at the SLF which resulted in the EPA designating it as a NPL site. See, e.g., Chang Test.; Nelson Test.; Ex. P-10.

In October of 1969, Bendix's Preenco incinerator began operating and Bendix burned its waste oil on site. Rosa continued to operate the SLF until April of 1971, however, no

¹¹ On cross examination, Demick testified that prior to 1972, he visited the SLF sporadically, perhaps yearly.

longer disposed of waste oils and solvents.¹² In April of 1971, Rosa sold the SLF to James Bartlett, who continued to operate the site until October of 1972.¹³ Bartlett did not dispose of any waste oil or solvents. Bartlett Test.

The SLF layout included five trenches, a can and bottle dump area, a whitegoods disposal area, and an alleged liquid waste disposal area. Ex. D-191. Two of the trenches were located in the southeast portion of the site (the "Southeast Disposal Area"). Rosa used the eastern trench (labeled "Trench C" on Exhibit D-191) on or around which surface staining (the "Eastern Stained Area") was discovered after the site's closure in 1969.¹⁴ Bartlett Test. Two trenches were located in the northern portion of the site (the "North Disposal Area") along with the can and bottle dump area. Rosa dug and filled the western trench (labeled "Trench B" on Ex. D-191) and the eastern trench was dug and filled sometime after 1969 ("Trench A"). Bartlett Test. The white goods disposal area and liquid waste disposal area were located at the western border of the site. Ex. D-191. The fifth trench was located on the southern

¹² Rosa had agreements with the Town and Village of Sidney and Tompkins to dispose of all of the waste generated by their residents. He also continued to haul Bendix's paper waste.

¹³ Bartlett continued to haul refuse under Rosa's agreements and entered into an agreement to accept refuse from residents of the Town of Masonville for disposal.

¹⁴ The Eastern Stained Area is discussed in more detail during the later discussion of the site investigation.

portion of the site, slightly west of the Southeast Disposal Area (the "Southwest Disposal Area"). Bartlett dug this trench in 1972 and used it to dispose of household garbage.

Additionally, aerial photographs indicated that there was a disturbed area in the northeast portion of the site.

Both Rosa and Bartlett filled the trenches in layers. Specifically, they started filling the trench at one end, continued filling to the opposite end of the trench until there was a six to eight foot layer of refuse, and then began the operation again on top of the refuse. Bartlett Test.; Morley Test. When Rosa disposed of oil, he generally poured it directly on top of a layer of waste. Morley Test. Neither Rosa nor Bartlett collected liquid waste from any customers other than Bendix. Any oil cans, filters, etc. collected as part of the municipal solid waste operation contained, at most, residual oils. Bartlett Test.

When Bartlett closed the SLF in 1972, he hired someone to bait the site and cover it with two feet of ground cover. Ex. D-70. On January 4, 1973, the DEC inspected the site and found that about eighty percent of the site was covered but that there was protruding refuse "all over" and water had pooled on the completed areas. Ex. D-71. On January 19, 1973, a DEC inspector noted progress, however, found refuse strewn around the site and water pooling. Ex. D-72. In April of 1973, Bartlett signed a consent order dictating specifications for

closure of the site, which included covering all waste material with at least two feet of soil material, grading this material to prevent water pooling, and seeding the material. After Bartlett closed the site, he did not check to ensure that the Eastern Disposal Area had been properly covered.

DEC inspection reports indicate that the Landfill was never properly covered, graded, or seeded. See, e.g., Bartlett Test. (did not fully seed site); Dolph Test. (cover was not two feet); Ex. D-78 (DEC report noting that cover on Southeast Disposal Area consisted of fragmented shale and hardpan); Ex. D-77 (DEC inspection memorandum noting "small pockets and pools which could catch and hold rainwater and allow it to filter down through the landfill.").

In April 1973, the SLF began to release significant amounts of leachate. Exs. D-75; D-76; D-77; D-79.

In 1981, a leachate seep at the SLF was sampled and analyzed. The analysis detected 1,2,-transdichloroethylene, toluene, and PCB Aroclor-1248. The analysis did not detect any organic compounds. Ex. P-1, at 1-3.

In 1987, the DEC investigated the SLF. Seven Monitoring wells were installed during this investigation, the results of which indicated a "direct release of contaminants to groundwater and surface water." Ex. P-10 at 1-2.¹⁵ VOC

¹⁵ The groundwater contaminants included Vinyl Chloride, 1,1 Dichloroethane, Toluene, bis(2ethylhexyl)phthalate, TCE,

contamination was also found in leachate and sediment samples as well as samples of surrounding private wells.¹⁶ The DEC investigation concluded that the VOC and PCB contamination were directly attributable to the SLF because they were found in on-site monitoring wells where no up gradient source could exist and the presence of the contaminants was "consistent with the reported history of waste oil dumping at the site." Ex. P-10 at 4-9, 4-10.¹⁷

As a result of the DEC's finding VOCs and PCBs surrounding the SLF and their finding that the contaminants were directly attributable to the site, the EPA put the SLF on the NPL in 1989.¹⁸ Chang Test.; Ex. P-1 at 1-2; Ex. P-9. Thereafter, the

Trans-1,2-dichloroethene, TCA, and PCB Arochlors 1242 and 1248. Ex. P-10 at 1-2. Surface water and sediment sampling found Trans 1,2-dichloroethene, TCE, Toluene, and Tetrachloroethene. Significant contaminants detected in private wells included Trans 1,2-dichloroethene, TCA, and TCE. Leachate samples indicated the presence of Toluene, Vinyl Chloride, Trans 1,2-dichloroethene, Diethylphthalate, Acetone, Ethyl Benzene, Xylene, 2-Methyl Phenol and Isophorene. Ex. P-10 at 1-1, 1-2.

¹⁶ The DOH conducted the sampling of private wells in 1985 and 1986.

¹⁷ The VOC content is consistent with Bendix's waste oil and solvents, which contained, among other things TCA and TCE. Vinyl Chloride and Trans 1,2dichloroethene are likely degradation products of TCE. Ex. P-10 at 4-6.

¹⁸ The Defense argues that the highest risk to human health associated with the SLF found in the remedial investigation ("RI") performed by Malcom Pirnie arise from inorganic (mainly metal) contamination. These risks are documented in the RI, Ex. P-1, Section 4. The decision to put the SLF on the NPL, however, was made before Malcom Pirnie conducted the RI on the basis of the information contained in the DEC's 1987 Phase II

EPA hired Malcom Pirnie, Inc. ("Malcom Pirnie") to perform a remedial investigation ("RI") of the SLF.¹⁹

As part of the RI, Malcom Pirnie excavated 24 test pits to "aid in defining the horizontal limits of waste at the site."

Ex. P-1, at 2-3. Malcom Pirnie excavated the pits in areas where information regarding the presence of buried waste was inconclusive, generally along the eastern boundaries of the North and Southeast Disposal Areas. Ex. P-1 at 2-3, 2-4. During the excavation, workers used a photoionization detector ("PID") and radiation monitor to monitor organic vapors.

Malcom Pirnie took 23 sediment samples, 19 surface water samples, and 5 leachate samples. Tests of the surface water samples detected acetone, 1,2-DCE, TCE, chloromethane, BEHP, and PCB Aroclors 1248 and 1254. Ex. P-1 at 4-12.²⁰ Tests of

investigation and report. Chang Test.; Ex. P-1 at ES-1, (the EPA put the SLF on the NPL in 1989, Malcom Pirnie conducted the RI from 1991-1994); see also Ex. P-1, at 1-3 ("The purpose of the Phase II investigation was to summarize existing data and conduct limited sampling and analyses of environmental pathways in order to satisfactorily complete a [NPL] site nomination package.").

¹⁹ If the site was not placed on the NPL, it would have been unlikely that the EPA would have become involved in the investigation and clean up. Chang Test. (stating she does not know of any sites the EPA is involved in cleaning up that are not on the NPL).

²⁰ Only one sample contained PCBs at concentrations above the CRQL.

sediments contained predominantly PCBs²¹ and pesticides whereas tests of leachate detected TCE, DCE, DCA, and VC and some PCBs.

Surface and subsurface soils were also taken and analyzed in order to determine the nature and extent of surface soil contamination, site-specific background contaminant concentrations, and the vertical extent of contamination. Ex. P-1, at 2-7. The results of these samples indicated, among other things, that VOC contamination was concentrated mainly on the Western portion of the site²² and PCB contamination was found in the Eastern Stained Soil Area (primarily), the Southwest Disposal Area, the North Disposal Area, east of the North Disposal Area, and along the road immediately downhill from the North Disposal Area. Ex. P-1, at 4-4.²³ The testing also found detectable levels of numerous inorganic compounds, which the Court will not detail. Ex. P-1, at 4-5.

As noted above, Malcom Pirnie tested surface and subsurface soils from the Eastern Stained Area, located in the

²¹ Most of the sediment samples that detected PCBs were taken from the South Pond. It is undisputed that the RHRL oil pit overflowed and leaked into the South Pond in 1966.

²² VOCs that exceeded the NYSDEC Technical Administrative Guidance Memorandum ("TAGM") levels included methylene chloride, acetone, and 1,2-DCE (a breakdown product of TCE), DCA, toluene, ethyl benzene, xylene, benzene and tetrachloroethene. Ex. P-1, at 4-3.

²³ The testing found PCB Aroclors 1242, 1248, 1254, and 1260. Testing of the blue drum, found on the surface of the SLF, found Aroclor 1016.

Southeastern Disposal Area. Visual inspections of the area indicated surface soil staining and an absence of vegetation.²⁴ As noted above, soil testing found a high level of PCB contamination. Testing found VOC contamination in some samples at very low levels.

As part of the Groundwater investigation conducted, Malcom Pirnie installed 30 monitoring wells, 28 bedrock wells, and two glacial till monitoring wells during the first Phase of the investigation. Results from this phase of groundwater testing detected predominantly TCE, TCA, and their breakdown products. PCBs were not detected. Ex. P-1, at 4-6. During the second phase, Malcom Pirnie installed 11 monitoring wells, ten bedrock wells, and one glacial till monitoring well. Tests of these samples found VOCs at generally the same or lower volumes than in round one. PCBs were detected in several samples. Ex. P-1 at 4-8. TCE was detected in approximately 85% of the monitoring wells.

A light non-aqueous phase liquid (LNAPL) was detected in Monitoring Well 2S, which was installed above the northern corner of the Northern Disposal Area. The thickness (from .33 feet in February 1992 to not-present in the four measurements prior to issuance of the RI) and contamination components and

²⁴ Nelson testified that in his experience the absence of vegetation indicates the release of petroleum/chlorinated materials.

levels varied throughout testing.²⁵ PCB Aroclor 1242 was detected at a concentration of 6.1% in one sample and was not detected in other samples. VOCs, including those known to be present in Bendix's waste, were detected at highly variant levels. Ex. P-1, at 4-9. This contamination is consistent with disposal of waste oils. See, e.g., Harris Test.

At the conclusion of the RI, Malcom Pirnie determined that the primary risks to human health arose from the presence of TCE and manganese in spring water, and the manganese, arsenic, antimony, barium, beryllium, Vinyl Chloride, and PCBs in groundwater. Ex. P-1, at 7-4. Some of the most significant risks at the site were associated with metals.

The sampling evidence outlined above, and in more detail in the investigative reports cited, establishes that the soil and water at and surrounding the SLF are contaminated with PCBs and VOCs in levels that are not consistent with MSW only landfills.

Malcom Pirnie issued a Feasibility Study ("FS") in 1995 that evaluated remedial alternatives for the SLF. Ex. P-2.

As part of the RIFS process, Malcom Pirnie examined the

²⁵ Nelson explained that the appearance and disappearance of this LNAPL could be explained by the hydrogeology and geology of the site and, more specifically, the theory of matrix diffusion. Matrix diffusion allows a contaminant mass to move into a porous bedrock matrix through a process of molecular diffusion which causes the contamination to disappear from the surface of groundwater even though it remains in the surrounding bedrock. Nelson Test.

geology and hydrogeology of the SLF. This examination indicated that there were significant differences in the hydrogeology of the RHRL and the SLF, including but not limited to, the depth of soil between the surface and groundwater. At the RHRL, this depth was about ten feet whereas at the SLF it could have been one hundred feet. Nelson Test.

In September of 1995, the EPA issued a Record of Decision ("ROD") with respect to the SLF, which recommended excavating and relocating waste from the Can and Bottle Dump Area, constructing four caps to cap the North Disposal Area, Whitegoods Disposal Area and Alleged Liquid Waste Disposal Area, the Southeast Disposal Area, and the Southwest Disposal Area,²⁶ constructing fences around these areas, extracting and treating contaminated water from Monitoring Well 2S; restricting the future use of the Site; and instituting long term groundwater, surface water, and sediment monitoring. Ex. P-3. Similar caps were used in the closure of the RHRL.

During the closure, two blue drums were found on the surface of the site at the bottom of the North Disposal Area. Dolph Test. One drum contained liquid, which was tested and contained PCB Aroclor 1016. Chang Test.

Defendants argue that, based on the evidence presented at trial, the Court should find that the environmental harm at the

²⁶ Capping prevents infiltration of the site and dermal contact with the waste. Chang Test.

SLF is consistent with that found at MSW only sites. For the following reasons, the Court will not make such a finding.

First, as discussed above, Rosa dumped substantial amounts of Bendix waste oil into the garbage trenches at the SLF. The factual testimony established that between 1964 and 1969 Rosa picked up waste oil and solvents from the Bendix plant on a regular, if not daily, basis such that he collected at least fifty barrels of waste oil a week. The evidence further established that Rosa opened the SLF in 1967 and that for at least a portion of the 1967, 1968, and 1969, Rosa dumped that oil in the garbage trenches at the SLF. The oil was distributed in layers, as was the garbage, and, thus, the oil was not dumped in the same area consistently. This finding is inconsistent with Allied Signal's argument that the SLF is a MSW only site.²⁷

Dr. Robert Harris, Alliedsignal's expert, testified that the harm at the SLF site is inconsistent with the disposal of

²⁷ At trial, the Court reserved on the Government's motion in limine seeking to preclude Dr. Harris's testimony because it was based on a false factual premise - namely that Bendix waste oils were not disposed of at the SLF. The Government now renews that motion as a motion to strike. Dr. Harris's testimony indicated that his opinion was not consistent with a finding that substantial amounts of waste oil were disposed of at the SLF. The Court did not make this finding prior to trial and, in fact, this was a highly disputed issue at trial. Dr. Harris's testimony, therefore, was not inconsistent with an established fact. The Government's motion to strike this testimony is DENIED.

100,000 and 345,000 gallons of waste oil. Dr. Harris opined that if this amount of oil had been disposed of directly onto the ground at the bottom of one of the trenches, the NAPL would flow into the spaces between the dirt particles and migrate down to the water table. A portion of this NAPL would remain behind as "residual" NAPL, leaving a blueprint of the NAPL's path. Dr. Harris further explained that water following the NAPL, filtering through the soil, would increase the surface area of the NAPL, dissolve the constituents of the oil and chlorinated solvents. This phenomenon would leave behind residual NAPL in the soil, a defined "plume" of chlorinated solvents in groundwater at levels ten to one hundred times greater than those found in the SLF and a layer of NAPL floating on top of the groundwater table itself.

Dr. Harris testified that if Rosa dumped the waste oil and solvents directly onto the garbage, similar evidence would have been left. Specifically, Dr. Harris opined that the waste oil would filter through the soil (losing some mass as residual NAPL) and the majority of the oil would filter into the soil below. In this scenario, NAPL would be left in the garbage, additional residual NAPL would be left in the soil below the waste mass, and groundwater filtering through the garbage and soil would result in a defined plume of chlorinated solvents in the groundwater ten to one hundred times greater than those found at the SLF.

Defendants argue that the test pit samples buttress Dr. Harris theory, and their contention that waste oil was not dumped on the garbage, insofar as there is no evidence that the test pits contained waste oil, waste oil residue, or even the odor of oil. Although this is true, the purpose and placement of the test pits negate any such negative inference. The RI indicates that only a minute portion of the site was penetrated by test pits and that the purpose of the test pits was to determine the outer boundaries of the waste rather than the contents of the waste. Test pits were not drilled in the middle of the waste both to protect the workers and to prevent opening vertical conduits for migration of waste, oil, and water. Moreover, the test pits excavated at the margins of the waste masses and, in most cases, did not reach the bottom of the waste mass.

Second, sample results from Monitoring Well 2S and the Eastern Stained Area are consistent with the disposal of oily waste, not MSW. Dr. Harris concedes that the sampling data found in Monitoring Well 2S is inconsistent with a MSW only site, however, suggests that the harm connected to this monitoring well is divisible in the sense that no evidence has connected it to Bendix. Harris Test. At this juncture, however, it is Bendix's burden to prove that its waste did not cause the harm at Monitoring Well 2S. Defendants failed to do

this.²⁸ In fact, Dr. Harris admitted that because he had no idea what caused the contamination at Monitoring Well 2S, it was possible that it was caused by Bendix waste. Thus, for the purposes of determining whether the harm at the SLF is consistent with that at other MSW sites, the Court cannot ignore the Monitoring Well 2S data or assume that its contamination can be attributed to a source other than Alliedsignal.²⁹ Dr. Harris conceded that the high level of PCBs and LNAPL found on the surface of the water in Monitoring Well 2S were inconsistent with his conclusion that the harm at the SLF is consistent with that found at a MSW only landfill. Rather, the LNAPL is consistent with the disposal of oily waste.

Similarly, Dr. Harris's opinion excluded sampling from the Eastern Stained Area. Again, Defendants' argument that the

²⁸ To the extent Defendants argued that the contamination of Monitoring Well 2S could have been caused by leakage of the blue drum, which was found on the surface of the SLF after its closure, the Court notes that testing of the contents of the blue drum found PCB Aroclor 1016 while testing of the LNAPL in the Monitoring Well found PCB Aroclor 1242.

²⁹ Defendants also suggest that the Court consider Monitoring Well 2S as an "orphan" and, if it deems it appropriate, attribute all costs associated with Monitoring Well 2S to Alliedsignal. While at first blush this solution seems attractive, it circumvents the question of whether divisibility is appropriate to begin with because it contradicts Dr. Harris's opinion that the harm at the SLF is consistent with MSW. The Court cannot first exclude data associated with Monitoring Well 2S in its analysis of divisibility and then add Monitoring Well 2S back into the equation at the apportionment phase.

Government did not prove that Bendix's waste oil caused the soil staining impermissibly reverses the burden of proof. Defendants did not establish that Bendix Waste Oil did not cause the surface staining in the Eastern Stained Area. Evidence and argument that Bendix waste oil could not have caused this staining because Bartlett covered this area in 1973 (and the staining was on the surface) is unpersuasive in light of the facts that numerous DOH reports found protruding waste at the site after closure began, Bartlett admitted that he did not walk the entire site to ensure that the Southeastern Disposal Area had been properly covered, and the stained surface oil was littered with distinctive rubber moulding waste that is attributable to Bendix.³⁰

Similarly, the fact that samples of the surface area had high PCB readings and low or nonexistent VOC readings (Bendix Waste Oil and Solvents were disposed of together) does not prove that Bendix's oil did not cause the staining. VOCs are more water soluble than PCBs and "tend not to absorb strongly to soils," thus, VOCs in the surface soil would be expected to volatilize in the air and be absorbed into water and transported into the water table. See generally Ex. P-2 at 5-5.

³⁰ Although the rubber moulding waste was disposed of in the "paper waste" truck rather than the oil, its presence on the surface indicates that this area was not covered after Bartlett closed the site.

Finally, Rosa used the trench below (at least in some parts the boundary of the waste is not clearly delineated) the Eastern Stained Area in 1969, a period in which he was disposing of waste oil at the SLF.³¹

Accordingly, the Court cannot find that Bendix waste oil did not cause the surface soil staining and contamination in the Eastern Stained Area and, thus, cannot remove this area from consideration when determining whether the harm at the SLF is consistent with MSW only sites. The high PCB contamination in this area belies any such contention.³²

Considering the contamination at the site as a whole, including the contamination at Monitoring Well 2S and the Eastern Stained Area, the Court cannot conclude that the harm at the SLF is consistent with an MSW only site, rather, the Court finds that the harm at the SLF was consistent with the disposal of oily waste, and more specifically, Bendix's waste. Nelson Test.³³ The evidence further indicates that the SLF was

³¹ Although there is no eyewitness testimony to the dumping of Bendix oil in this area, Bartlett testified that Rosa was using the trench in the Southeastern stained area in 1969. Coupled with the evidence that Rosa was dumping oil into the MSW trenches during this time period, it is reasonable to infer that Rosa dumped Bendix oil in this area.

³² PCB contamination in the Eastern Stained Area was detected in ranges as high as 180,000 $\mu\text{g}/\text{kg}$ and 158,000 $\mu\text{g}/\text{kg}$. The highest PCB contamination Dr. Harris found in the leachate of a MSW only site was 2.2 parts per billion.

³³ Nelson testified, among other things, that a comparison of the types and frequencies of detection between the RHRL and

placed on the NPL as a result of PCB and VOC contamination consistent with that caused by Bendix's waste. See, e.g., Chang Test.; Ex. P-10. Therefore, the Court cannot find that Bendix's waste had a marginal environmental impact and that MSW caused the primary harm at the SLF.³⁴

IV. Conclusions of Law

It is settled in this Circuit that "[l]iability under [CERCLA] . . . is joint and several, unless potentially responsible parties can prove that the harm is divisible." B.F. Goodrich v. Betkoski, 99 F.3d 505, 514 (2d Cir. 1996), cert. denied, 524 U.S. 926 (1998). Alliedsignal argues that the harm at the SLF is divisible because: (1) the environmental conditions at the SLF are consistent with the disposal of

the SLF indicated that the two sites had the same source of contamination. Nelson explained that the difference in concentrations at the two sites (contamination was found in higher volumes at the RHRL) could be attributed to the difference in waste disposal (at the RHRL waste was dumped directly in pits whereas at the SLF waste was distributed in layers on MSW) and hydrogeologic differences between the two sites.

³⁴ To the extent Defendants argue that the harm at the SLF is due to improper closure rather than Bendix waste, the Court disagrees. Although improper closure may have contributed to the harm at the site, especially in the Southeastern Disposal Area, but for the waste, improper closure would not have resulted in environmental harm. Alliedsignal has provided no basis from which the Court could conclude that improper closure caused a specific amount of harm above and beyond that which would have occurred if the SLF had been closed properly in the 1970's or convinced the Court that such apportionment would be legally feasible. Accordingly, the Court cannot apportion harm on this basis.

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municipal solid waste ("MSW") not waste oil or solvents in excess of what would normally be expected in MSW; (2) all of the MSW disposed of at the SLF, including that attributable to Alliedsignal, is indistinguishable in terms of its environmental impact; and (3) the landfill closure costs have been caused by the volume of MSW located there. Thus, according to Alliedsignal, liability can be apportioned based upon a determination of the potentially responsible parties' ("PRPs") volumetric contributions to the site, which contributions can reasonably be quantified. The Government responds that there is not a single, divisible harm here, but an additional harm caused by Alliedsignal's disposal of waste oils at the SLF.

For the reasons discussed above, the Court finds that Defendants did not prove that the harm at the SLF was consistent with MSW only landfills or that Bendix's waste oil and solvents did not have a significant impact on the environmental harms at the site. Therefore, the Court cannot find that the environmental harm at the SLF is divisible. Moreover, because the Court found that substantial quantities of Bendix waste oil and solvents were disposed of at the SLF and that this waste had an environmental impact above and beyond that caused by MSW, Alliedsignal's proposal that the Court apportion the harm in relation to the volume of MSW it

contributed to the SLF is unreasonable. Accordingly, the Alliedsignal is jointly and severally liable for the environmental harm and resulting investigation and clean up of the SLF.

IT IS SO ORDERED

August 10, 2001

Thomas J. McAvoy
Hon. Thomas J. McAvoy
U.S. District Judge